A course plan for a BCB-MA double major

1. WPI Degree requirements (totally 12/3 units)

    2/3 units of Social Sciences
    6/3 units of Humanities and Arts
    3/3 units of IQP
    1/3 unit of Physical Education (4 PE classes)

2. BCB distribution requirements (totally 31/3 units + 1/3 extra unit in joint MQP)

2.1 Non-MA courses for the BCB major (totally 17/3 units).

Notes: The detailed notes for these courses are listed in the program description of the BCB major.

    4/3 units of Computer Science
    5/3 units of Biology
    4/3 units of Chemistry
    3/3 units of Bioinformatics and Computational Biology
    1/3 unit of Social implications

2.2 MQP (BCB-MA joint) 4/3 units

2.3 Mathematics courses (totally 5/3 units)

    3/3 units of Mathematics in calculus and statistics:
- MA1021 (Calculus I)
- MA1022 (Calculus II)
- MA2611 (Applied Statistics I)

    2/3 units of Mathematics in linear algebra and statistics:
- MA1023 (Calculus III)
- MA2612 (Applied Statistics II)

2.4 Advanced disciplinary courses in Math (totally 6/3 units)

- MA2631 Probability (I don't think MA1024 is necessary, even if it is listed as recommended)
- MA2431 Mathematical Modeling with Ordinary Differential Equations (recommend MA1024, MA2051, and MA2071)
- MA 3627 Applied Statistics III
- MA 4631 Probability and Mathematical Statistics I   (1.5/3 units)
- MA 4632 Probability and Mathematical Statistics (1.5/3 units)

3. Based on a BCB major satisfying the above requirements, extra 8/3 units of MA courses lead to the 2ⁿᵈ major in Mathematical Sciences.

(Note: These include the recommended courses for MA2431 listed above, which is not a must-have if the 2nd major in MA is not of interest.)

> 2/3 units of must-include (or their equivalents) + 3/3 units recommended
> - MA3831 (Advanced Calculus I), which has recommended 1/3 unit of
>   - MA2071 (Matrices and Linear Algebra I)
>   - MA2051 (Ordinary Differential Equations)
>   - MA1024 (Calculus IV)
> - MA3832 (Advanced Calculus II)
>
> 1/3 unit: At least one of
> - MA3257/CS4032 (Numerical Methods for Linear and Nonlinear Systems), or MA3457/CS4032 (Numerical Methods for Calculus and Differential Equations), or equivalent
>
> 1/3 unit: At least one of
> - MA3823 (Group Theory), or MA3825 (Rings and Fields), or equivalent
>
> 1/3 unit: At least one of
> - MA2073 (Matrices and Linear Algebra II), or MA2271 (Graph Theory), or MA2273 (Combinatorics)

4. Math major distribution requirements are

(A) 21/3 units of Math (including MQP, with a list of must included courses mostly described in above Part 3) and

(B) 9/3 units of sciences, computer sciences, etc. (with conditions of types of courses).

Assume a MA major satisfies above requirement (A) by courses in sessions 2.2, 2.3, 2.4 and 3 (totally 23/3 units), the difference between above requirement (B) and the courses in session 2.1 indicates that **a MA major also needs extra 8/3 units to get the 2nd major in BCB.**